U.S. Department of the Interior
U.S. Geological Survey

USGS Geospatial Liaison Guide to the USGS Geospatial Product and Service Contracts (GPSC)

Tim Saultz
Elizabeth McCartney
Larry Moore
Eddie Schwertz

National Geospatial Technical Operations Center III (Rolla)

April, 2007

Version 1.5

Major Changes by Version

Version 1.1 (February 2007)

- State Liaison to Geospatial Liaison
- Financial Information updated

Version 1.2 (February 2007)

- Defined "reimbursable" customer clearly at the beginning and removed the "reimbursable" descriptor of customer later in the document
- Additions in 5.1.3 and 5.3.1

Version 1.3 (March 2007)

- Liaison comments incorporated
- Expanded definition of "Commercial Partnerships Team."
- Added definition of IGCE
- Added QA/QC planning to the SOW definition.
- Clarified "Lines of Communication" figure.
- Clarified RA and TO.
- QA/QC
- SOW vs. TO and RA (diagram)

Version 1.4 (March 2007)

- Expanded definition of SOW (must define responsibilities of interested parties)
- Added NGTOC Technical Staff to definitions
- 4.1—involve NGTOC early in process if their services are being requested.
- 4.6—paragraph 2
- 5.1.2—SOW, must also define responsibilities of interested parties.
- 6—"may need separate agreement" rather than "requires separate agreement."

- Updated FIG 1 description.
- 5.1.3—Last paragraph is new and relates to “off the cuff” ballpark estimates.

Version 1.5 (April 2007)

- Minor editorial changes.
- Project Planning forms for Lidar and Ortho-Imagery added in Attachment I.

Table of Contents

1 Introduction

This document is a guide for USGS Geospatial Liaison (hereafter referred to as Liaisons) to States, local governments, and other organizations. It provides top-level information about procedures for making the Geospatial Product and Service Contracts (GPSC) available to other (non-USGS) federal, state and local organizations.

This paper contains no procurement-sensitive information and may be freely shared with State/local organizations. A list of Acronyms and Points of Contact can be found in Attachments A and B respectively.

2 Definitions

Client or **Customer** – Government organizations that use the GPSC to obtain geospatial data or services. The relationship between clients and the CPT is initiated, organized, and managed by the Liaison. There are two major categories of clients. The first category is reimbursable clients or customers *outside* of the USGS. Reimbursable clients are typically State or local organizations that sign Joint Funding Agreements (JFAs) with USGS, Federal agencies that sign Interagency agreements, or if they are military, Military Interdepartmental Purchase Agreements (MIPRs). The second category of clients is USGS organizations using the GPSC through the exchange of *appropriated funding* (SIRAD) via Changes of Allocation (COA). *NOTE: For the purposes of this document, we will focus on the* ***reimbursable client only****.*

Contracting Officer (CO) – Though ultimately responsible for everything surrounding the GPSC, the CO is not within the scope of this document. Liaisons will normally have no contact with the CO.

Contracting Officer's Representative (COR) – Monitors the contractor's technical efforts to ensure that performance strictly conforms to the terms of the contract. The COR is also the primary interface between the contractor and the Contracting Officer on matters pertaining to the contractor's technical effort. The COR is not authorized to direct the contractor to perform work beyond that described in the contract. The COR acts on behalf of the CO for day-to-day operations, and is the top-level USGS point of contact for Liaisons. The current COR is Tim Saultz (see Appendix B for full contact information).

Commercial Partnerships Team (CPT) – Organizational unit in Rolla that manages the GPSC. Product and operations experts who help prepare technical requirements, Independent Government Cost Estimates (IGCE), and provide technical guidance to Liaisons and clients.

Commercial Partnerships Team Point of Contact (CPTPOC) – Members of the CPT who serve as primary sources of information about the GPSC; currently Tim Saultz, John Murphey, Debbie Cochran, and Gail Dunn (see Attachment B for full contact information).

Contractor or **Vendor**– Private companies that have successfully bid on the GPSC advertisement, thereby winning the right to be assigned specific contract tasks. *Contact between contractors and Liaisons must always be through the CPTPOCs or COR.*

Independent Government Cost Estimate (IGCE)-A *best effort* estimate based on many hours of research by the CPT. The importance of a well defined SOW is critical in formulating the IGCE.

Slight variations in the specifications of a project can result in substantial differences in the final cost of the project.

Master Agreement Cost Center – The Regional NSDI Partnership Cost Center that signs the Master Agreement with the reimbursable client. This cost center owns the Master Agreement and is responsible for entering the reimbursable agreement into BASIS+. The owner of the Master Agreement for Liaisons is the Eastern Region, Central Region, or Western Region NSDI Partnership Office. See Attachment B for contact information.

NGTOC Finance POC- Works with Liaisons and the Regional Finance POCs to ensure that agreement procedures and the obligation of reimbursable funds from the client to NGTOC III cost center are properly handled via an Agreement Allocation (sub-allocation) of funds to NGTOC III (cost center 6103) in BASIS+. The owner of the Master Agreement and the Liaison must ensure that the reimbursable agreement follows all USGS requirements as outlined in Chapter 4 (Types of Reimbursable Agreements) of the U.S. Geological Survey Financial Operating Procedures Handbook and the Survey manual (SM 500.1 through SM 500.3). Questions may be directed to the NGTOC Finance POC as questions arise and to seek overall guidance. Once funds have been sub-allocated to the NGTOC for use on the contract, the NGTOC Finance POC will set up appropriate account number(s) that will be used on the DI-1. Task Orders cannot be assigned until the client's funds have been allocated to NTGOC III. The NGTOC Finance POC participates on the Contract/Partnerships call in order to track GPSC funds. The NGTOC Finance POC for the GPSC is currently Eddie Schwertz. Eddie will retire in late September at which time his replacement will be named.

NGTOC Management – The management chain of the CPT. This chain is currently:

Supervisor: Bob Rinehart
GIOT team lead: Larry Moore
NGTOC-III Center Chief: Eric Constance
NGTOC Acting Director, Kari Craun

NGTOC Technical Staff-Provide assistance to Liaisons in the formulation of specifications for specific products and may also provide services such as evaluation of deliverables. Provide technical assistance to CPT as needed.

Regional Finance POC – Works with Liaisons to clarify agreement procedures and prepare the USGS Reimbursable Agreement Checklist and enters the Master Agreement into BASIS+. Once the Master Agreement is entered into BASIS+, the Regional Finance POC will sub-allocate funds to NGTOC III. Regional Finance POCs for the three Regional NSDI Partnership Offices are Lindsay Elliott – Eastern Region, Cheryl Davis – Central Region, and Pam Steigerwald – Western Region. Regional NSDI financial POCs may direct agreement related questions concerning the GPSC to the NGTOC Finance POC (Eddie Schwertz).

Reimbursable or Master Agreement: The Reimbursable Agreement is a formal document that obligates reimbursable funding for the project from the client to the NGTOC (see Attachment C for "Steps Required to Process USGS Reimbursable Agreements"). The document that is entered into BASIS+ by the Regional Finance POC is the Master Agreement. The Master Agreement is designated as a "Reimbursable" Agreement when entered into BASIS+. The Statement of Work is referenced as an integral part of the Reimbursable Agreement. As noted in the Client definition, the main types of Reimbursable Agreement documents are the Joint Funding Agreement (State/Local clients), the Interagency Agreement (Other Federal agencies), and Military Interdepartmental Purchase Agreements (MIPRs with Department of Defense agencies).

Statement of Work (SOW) – A description of the specific work to be performed by the contractor that clearly states the nature and requirements of the project including area of interest, product specifications, deliverables, delivery dates, and QA/QC plans. An accurate and timely SOW will help speed the contracting process and ensure the end client receives the products they need. The first version of an SOW is normally written by the client and/or Liaison, and is later refined into the Task Order by CPT staff, and into the Reimbursable Agreement by the Liaison and the Regional Finance POC. As an integral part of the Reimbursable Agreement, the SOW must also clearly define responsibilities of the various interested parties (i.e. USGS, Vendor, and Client). It expected that the SOW document will go through much iteration before being finalized in the Reimbursable Agreement and Task Order.

Task Order – The document sent from the CPT to a contractor defining the work of a project. The Task Order is a formal contracting document between GPSC (NGTOC III) and the vendor. The Task Order evolves *from* the SOW through a series of reviews and enhancements.

3 Products and services

The following is a brief outline of the products and services within the scope of the GPSC.

1. Aerial data acquisition and off-the-shelf archived aerial imagery

   Includes photography, Lidar, IFSAR, RADAR, digital multi-spectral and hyper-spectral imaging. All forms of digital sensor system technologies. Both film and digital output.

2. Survey and control services
3. Analytical aerotriangulation
4. Scanning services

   All types of materials. Also includes data merging, registration, alignment, and georeferencing.

5. Orthophotography
6. Acquisition of ancillary data

   Data obtained by contacting other government agencies, through library searches, database and web searches, etc.

7. Map collection and revision

   Production of USGS-standard quadrangle maps and quadrangle-based digital products.

8. Product generation

   Production of graphic publication separates and other hard copy products from digital files and scribed compilation manuscripts.

9. Thematic mapping

   Mapping done from a variety of remotely sensed sources and existing ancillary data, including, but not limited to, land characterization, terrain modeling, plant vitality, soil moisture, thermal variance, and vegetation themes. Other services that cannot be readily assigned to the above categories, including but not limited to custom mapping, GIS analysis, software development and support, standards development and review, quality control and assurance.

4 Roles and responsibilities

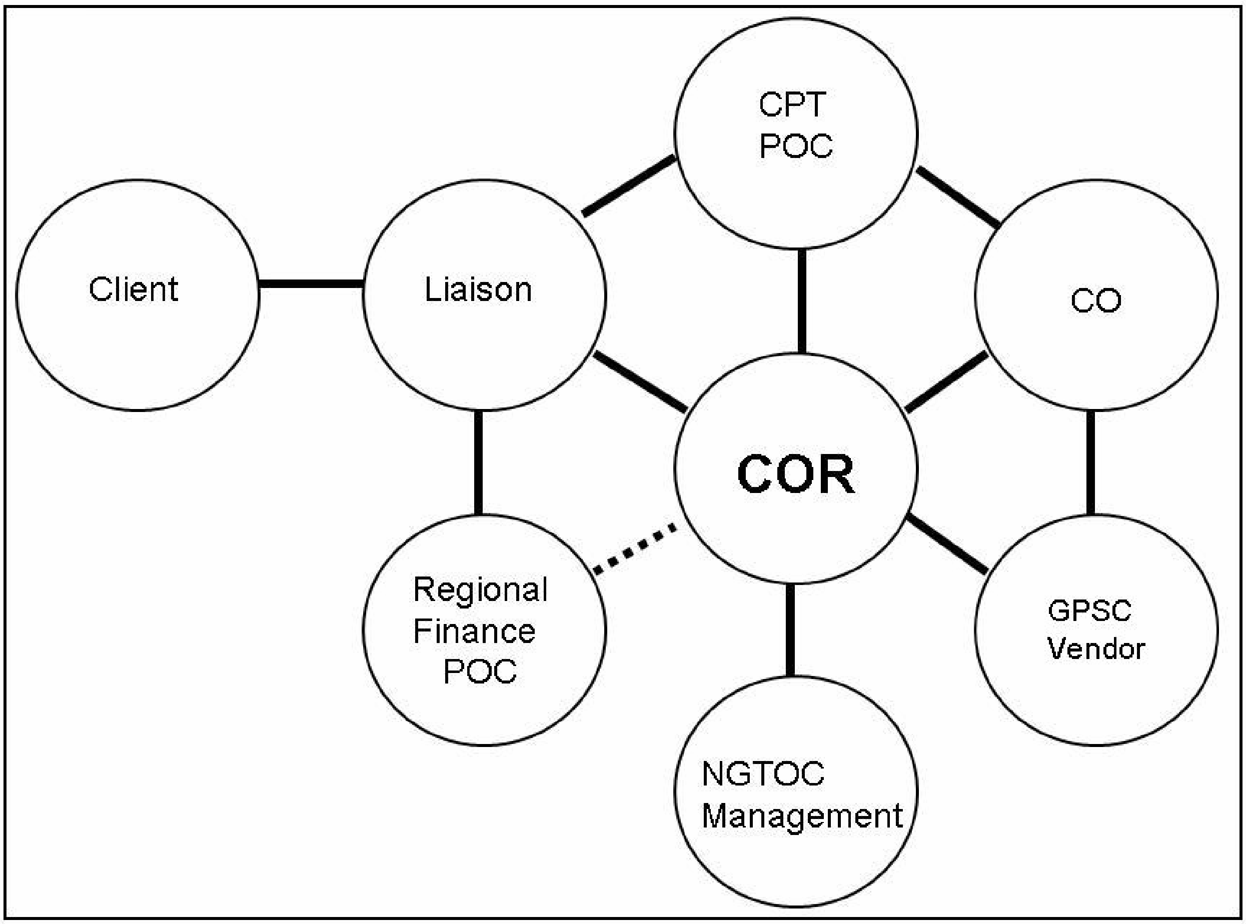

Figure 1. Lines of communication for GPSC contract work.
The black lines represent communication routes for GPSC task work. The absence of a direct link between two entities indicates that communication should involve a third and sometimes fourth party. For example, communication between the Client and CPT POC should include the Liaison and communication between the Client and GPSC Vendor must *always* include the COR and preferably the Liaison also. Note the central role of the COR.

The scope of this diagram is the GPSC contracting process. It does not imply (for example) that a client organization is prohibited from calling a GPSC vendor to discuss other business not related to any task contracted through GPSC.

4.1 USGS Geospatial Liaisons

The Liaisons are the primary USGS point of contact with the reimbursable client. They have a major role in the inception of the project. Liaisons must understand both the client's needs and the GPSC processes and services well enough to moderate and foster discussions between the client, the CPT, Regional Finance POC (owner of the Reimbursable Agreement), and in some cases, the

NGTOC. The Liaison is responsible for creating the first draft of a SOW and initiating the reimbursable agreement document. (refer to Attachment C for a list of the Steps Required to Process USGS Reimbursable Agreement.)

During the development of the SOW, the Liaison will work in tandem with both the CPT in the development of the Task Order and with the Regional Finance POC in working through the agreement process. Early involvement of the CPT, the Regional Finance POC, and if needed the NGTOC is vital to a successful and timely contracting process. The Liaison needs to work with the reimbursable client and the Regional Finance POC to prepare the required USGS Reimbursable Checklist (see Attachment D for samples of the checklist).

4.2 GPSC Contracting Officer's Representative (COR)

The COR represents the Contracting Officer (CO) in all aspects of contract and Task Order management. The COR is also a CPTPOC, but is "first among equals" within this group, and is responsible for maintaining a broad perspective of all projects in work. All communications with the CO go through the COR.

4.3 Commercial Partnerships Team Points of Contact (CPTPOC)

The CPTPOCs act for the COR in most routine discussions and transactions. They accept functional and technical requirements from the Liaison and client, coordinate technical support provided by other parts of the NGTOC, prepare IGCEs, and do most of the actual work of assembling completed Task Orders, coordinating with contractors, and monitoring assigned Task Orders.

4.4 Regional Finance Point of Contact (Regional NSDI Partnership Offices)

The Regional Finance POC is responsible for ensuring the Reimbursable Agreement is in proper order and that the USGS Reimbursable Checklist is completed (see Attachment D). They then must enter the Reimbursable (Master) Agreement into BASIS+. The Regional Finance POC is also responsible for preparing the Sub-Allocation email to move the client's funds from their cost center to the NGTOC III cost center (6103) via the Funding detail in BASIS+ (see Attachment F for an example). The DI-1 cannot be issued for the GPSC and negotiations with the vendor cannot commence until the reimbursable funds have been sub-allocated to NGTOC III.

4.5 NGTOC Finance POC

After funds have been sub allocated from one of the Regional NSDI Partnership Cost Centers, the NGTOC Finance POC will create an NGTOC allocation agreement that is linked to the Master agreement. The NGTOC Finance POC will create the needed account(s) and tie them to the NGTOC allocation agreement. The DI-1 will be created by the GPSC COR using these accounts.

4.6 National Geospatial Technical Operations Center

The NGTOC provides the environment and management infrastructure for the operation of the CPT. The NGTOC also provides technical support as needed to assist the CPT with project planning. NGTOC staffing is often not adequate to do everything requested by clients and liaisons.

NGTOC management allocates resources, sets priorities for the flow of contract management work, and resolves disagreements about priorities and scope of work.

Deliverable inspection and validation of GPSC deliverables are possible roles of the NGTOC. This may involve separate agreements and negotiations between the client/Liaison and the NGTOC. The NGTOC must be notified early in the planning process if their services will be needed.

5 Procedures

5.1 Task Order development overview

Developing and awarding a GPSC Task Order normally involves many discussions and several review cycles of the SOW. There are some hard requirements and fixed milestones in the process but between these milestones the work tends to be personal and iterative; progress is made through discussions and meetings rather than by (say) filling out forms. See Attachment H for Milestones and Checklists.

The following is an outline of the process at a high enough level of abstraction to be relevant to most cases.

5.1.1 Project concept formation

Projects typically begin with informal discussions between Liaisons and clients. Clients at this point often have an undefined requirement for data and are interested in understanding how the USGS might help them satisfy that requirement through an existing contract.

The Liaison's primary objective at this stage is to bring a reasonable level of precision to the discussion. The overall objective is to determine if a solution to the client's problem exists between these constraints:

1. Are the client's requirements for deliverables both technically and contractually possible?
2. Are the client's timeline requirements feasible?
3. Can the client's requirements be met within their budget and the contract awarded before the end of the client's fiscal year?

In the early stages of project planning it is common for there to be a huge disconnect between the product the client wants (or believe they want) and the amount of money they can spend. Quantifying, explaining, and then narrowing this gap is one of the most important objectives of this early planning phase. *Liaisons are encouraged to involve the CPT in the process as early as possible in order to help clarify these issues to the client.*

NOTE: Please submit the Project Planning forms found in Attachment I when defining specifications for Lidar and/or Orthoimagery projects. MS Word versions can be downloaded from:

http://thor-f5.er.usgs.gov/GPSC/LiDAR_Project_Planning_Requirements_4_11_2007.doc

and

http://thor-f5.er.usgs.gov/GPSC/Ortho_Imagery_Project_Planning_Requirements_4_11_2007.doc

5.1.2 Statement of Work (SOW)

When requirements have been adequately defined, the Liaison prepares a Statement of Work (SOW) attaching the appropriate Project Planning form for Lidar or Ortho-Imagery projects (See Attachment I or download MS Word version (see links above)). It is not uncommon for the SOW to undergo several adaptations as the Liaison moves through the planning process with the reimbursable client, CPT, Regional Finance POC, and possibly the NGTOC. During the development of the SOW, the Liaison will work in tandem with both the CPT in the development of the Task Order, with the Finance/Accounting POC in working through the Reimbursable Agreement process (Figure 2), and possibly the NGTOC if requesting services or technical expertise when defining specifications. See Attachments C, D, E, F, and G for supporting financial documentation.

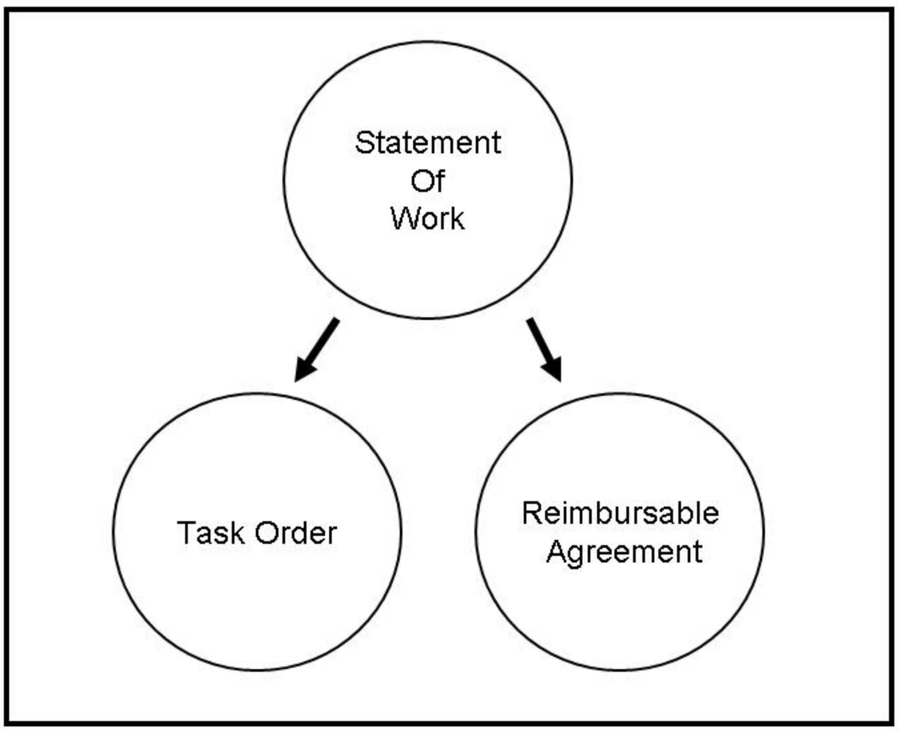

Figure 2. Work Process.
The SOW relates to both the Task Order and the Reimbursable Agreement and they are formulated in conjunction with each other.

The SOW describes the client's technical requirements, the precise geographic extent of the project area, deliverables, proposed timelines, QA/QC contingencies, and clearly defined responsibilities of the involved parties (who is responsible to deliver or produce what). The CPT depends on clear specifications in order to provide the Liaison and customer with timely and accurate cost estimates. It is the Liaison's responsibility to make the SOW reasonable. For example, the SOW should not propose deliverables that can reasonably be predicted to be far beyond the client's budget, or impractical delivery schedules. This SOW should not be written in "contract-language" but in clear normal narrative format. The CPT is available to assist the Liaison with the SOW. NGTOC is also available to assist Liaisons on technical matters relating to the definition of specifications. See Attachment B for points of contact.

Liaisons should interact with contractors only through the COR at Rolla, and should counsel clients to be similarly cautious. Confidentiality of information becomes critical and near-absolute at approximately the time the first version of the SOW is drafted.

5.1.3 Independent Government Cost Estimate (IGCE)

For most clients, the question "what will it cost?" is second in importance only to the question "what can I get?" Both questions normally come up extremely early in the agreement formulation process.

The term "cost estimate" has a precise meaning in a contracting process. The release of an IGCE by the CPT is a ***best effort estimate*** based on many hours of research by the CPT. The importance of a well defined SOW is critical in formulating the IGCE. Slight variations in the specifications of a project can result in substantial differences in the final cost of the project. The **final** cost of the project is not determined until GPSC negotiations with the contractor have been completed. It is critically important that all participants have a common understanding of exactly what is being promised for the amount estimated. But achieving this common understanding typically takes significant time, during which the client may not have any realistic idea of what their desired outcome could actually cost. The CPT will work toward a fair and reasonable cost for both the client and vendor. Note: The GPSC assessment (currently 5% of the total cost) is **NOT** included in the IGCE.

The NGTOC proposes to work toward a solution to this dilemma by publishing brief case histories of past Task Orders. These narratives will be sanitized and simplified, but will allow Liaisons and clients to make reasonable inferences about the costs of common products and services.

Liaisons need to have a reasonable assurance of funding before they request an IGCE. The CPT cannot make "off the cuff" ballpark estimates. What may look like a small change in the specifications can result in a very different IGCE. Each time an IGCE is calculated, it takes additional hours and some time days to accomplish.

5.1.4 Draft Task Order

The CPT uses the preliminary SOW to make a **preliminary** draft Task Order from which an IGCE is developed. Liaisons and reimbursable clients review and approve these documents. Once the IGCE and draft Task Order have been agreed to by the client, a draft DI-1 is prepared by the CPTPOC and funds are obligated. The funds for the project must be sub-allocated to NGTOC III before the draft DI-1 can be prepared.

5.1.5 Obligation of Reimbursable Funds from the Client

Before a Task Order can be sent to a contractor and negotiations can begin, funds must be formally obligated from the reimbursable client agency to the USGS. This is an extremely important task, as delays in funding allocation are often a significant bottleneck in the overall process and at times have cause aerial data acquisition to be delayed until the following flying season. The USGS cannot negotiate a Task Order until this step is completed by an appropriate exchange of official agreement paperwork and the sub-allocation of funds in BASIS+. Negotiating with the contractor earlier than this would commit the USGS to paying for the contractor's work, which would be a violation of Federal law. Once the sub-allocation of reimbursable funds has been received from the Regional NSDI Partnership Cost Center to NGTOC III, negotiations between the CPT and contractors can begin. The Liaison should be working with the Regional Finance POC (Regional NSDI Partnership Cost Center) from the outset of the project in order to ensure the financial process runs smoothly. Documents relating to the obligation of funds, including "Steps Required to Process USGS Reimbursable Agreements," can be found in Attachments C, D, E, F, and G.

5.1.6 Negotiations

Once the sub-allocation of funds through BASIS+ has been confirmed by the NGTOC Finance POC, negotiations between the vendor, CPTPOC, COR, and CO begins. Upon completion of a successful negotiation and reimbursable client approval, a Task Order is awarded. It is common for some revision of the Task Order and project cost estimates to take place at the conclusion of the negotiations.

5.1.7 Awarding of the Task Order

The CPT and CO proceed with the award process. These steps are mostly transparent to the client – one of the primary benefits to clients using the GPSC.

5.1.8 First deliverables, inspection and validation

Details of deliveries – schedule, media, destination, etc. – are specified in the task order. Where the products are delivered may depend on what inspection and validation procedures are desired by the client. In most cases there will be some inspection by an independent organization to evaluate whether or not the terms of the contract have been met, and in most cases, initial deliveries will be made to the CPT to ensure that project delivery requirements are met. Deliveries that do not meet specifications may be sent back to the contractor for rework. Inspection and validation is an important and complicated subject, and is therefore discussed further in Section 6.

5.1.9 Final deliverables and sign-off

CPTPOC and COR communicate with the vendor as needed to track progress. When all deliverables have been received and accepted by the reimbursable client, the COR notifies the CO, NGTOC Finance POC, and vendor. Once the vendor's invoice is received, it is reviewed for accuracy, approved by the COR, and then submitted to the NGTOC Accounting Technician for payment. The client is normally billed quarterly by the NGTOC Finance POC based on actual expenses during the previous quarter (90 days), the type of agreement, and other arrangements as outlined in the reimbursable agreements document.

5.2 Timelines

The time required for the processing in Section 5.1 varies widely. In one emergency case, the CPT took an entire Lidar project, from initial concept to execution in less than 8 hours with final delivery in 10 days. Elapsed times of 3-6 months are much more normal, and times longer than a year are not unheard of.

Contracting is a bureaucratic process that requires the cooperation of many people and the coordination of many schedules. No one person can control the overall process. Early involvement of the CPT and the appropriate Regional Finance POCs will help to speed the process. Major influences on the timeline include:

- The initial definition of requirements. Does the client have a clear idea of what they want, and does this line up with available funding? The definition of requirements may change depending upon the scope of the project, up until the TO is sent to contracts.
- The official transfer of funds via the sub-allocation of funds through BASIS+ at the appropriate time.
- Previously scheduled workloads of contractors. There are relatively few flying days in a year, especially for imagery, and only so much work can be accomplished on these days. The earlier the process is begun, the earlier the project will enter the contractors work queue. Waiting until the last minute means rushed documents with possibly incomplete or incorrect specifications and delays in vendor scheduling.
- Existing obligations of Liaisons and CPTPOCs.
- The relationship of desired work to the fiscal year cycles of both the Federal government and the client organization.
- The level of post-production inspection and QA desired, and what organization will do this work.

It is the position of NGTOC management and the CPT that awarding tasks quickly is not an inherent virtue. The desire for speed, while understandable, must always be tempered by a more fundamental requirement to provide data or services that will in fact meet the client's needs.

5.3 Data ownership

The ownership of the final deliverables is specified in the Task Order. While there are exceptions, in most instances the organization that pays the bill owns the data and other deliverables.

The USGS normally has an interest in obtaining a copy of these data for inclusion in national geospatial databases. Liaisons should explore this with clients and NGTOC management and attempt to negotiate mutually satisfactory data-sharing agreements early in the planning process.

6 Evaluation of deliverables

A normal part of any contracting process is to perform some inspection or evaluation of the deliverables. Ideally, this inspection is performed by an independent party, one that is not involved in the production of the data.

The CPT recommends two avenues for evaluation of deliverables.

1. **Another GPSC contractor (not the data producer) performs the validation**. This has been done a few times, and has worked well. An advantage of this method is that the client can specify, within very broad limits, how complete and rigorous the inspection should be. A disadvantage is that this adds additional costs. Having a contractor perform inspection and validation requires a separate Task Order, but this is transparent to the Liaison and client. (**Important Note:** If the client is going to pay for QA under a single agreement, he should be

aware that at the point he signs the initial agreement, the QA cost is still an estimate that will be finalized prior to QA Award.)

2. **The NGTOC performs the validation.** In the past, this has been more common, but it is not necessarily a better option. It requires early contact with NGTOC to ascertain availability of resources for the project. An advantage is that the NGTOC may do the work at no cash cost in exchange for a copy of the data for inclusion in USGS national geospatial databases. A disadvantage is that NGTOC data validation capabilities are more limited than those of contractors.

Other options would include the client doing the inspection themselves, or independently contracting with some other entity. While such options are theoretically feasible, the CPT would not normally recommend them. Both options tend to introduce instability into the business relationships of the major parties to the Task Order. If a contractor has no history with the GPSC or the Task Order contractor, it may be hard to achieve a reasonable common understanding of what comprises acceptable or unacceptable data.

Cases have also occurred in which a client has wanted to use the GPSC for inspection or validation of work that was contracted through some other vehicle. This is feasible, but requires considerable advance work to make the two different contract Task Orders consistent. It is not a good idea to hastily craft a GPSC inspection and validation task for another contract that is already finalized and in work.

Finally, there is of course the option of simply accepting the deliverables without inspection. This is not recommended, for obvious reasons.

7 Emergency Operations

The GPSC can be used as a contracting vehicle for emergency data collection, for example, to fly Lidar or aerial photography in the immediate aftermath of a hurricane, tornado, or other disaster. Since this is such an important subject it is treated in a separate document, "Standard Operating Procedure for USGS Geospatial Product and Service Contracts (GPSC) Response to Emergency Requests for Imagery," available by contacting the CPT at gpsc@usgs.gov. .

The importance of becoming familiar with these procedures **before** an actual emergency occurs cannot be overemphasized. Liaisons should be personally familiar with these procedures and work to transfer the knowledge to our data partners.

Attachment A. Acronyms

AOI	Area of Interest
CPT	Commercial Partnerships Team
CPTPOC	Commercial Partnerships Team POC
CO	Contracting Officer
COR	Contracting Officer's Representative
DI-1	Department of Interior Requisition Form
GIO	Geospatial Information Office
GIS	Geographic Information System
GPSC	Geospatial Product and Service Contracts
IA	Interagency Agreement (between Federal agencies)
IFSAR	Interferometric Synthetic Aperture Radar
IGCE	Independent Government Cost Estimate
JFA	Joint Funding Agreement (uses DOI Form 9-1366 (Oct 2005))
IPAC	Interdepartmental Payments and Collections
Lidar	Light Detecting and Ranging
MIPR	Military Interdepartmental Purchase Request (used by DOD agencies)
POC	Point of Contact
QA/QC	Quality Assurance/Quality Control
NGTOC	National Geospatial Technical Operations Center
NGTOC II	National Geospatial Technical Operations Center II (Formerly Rocky Mountain Mapping Center)
NGTOC III	National Geospatial Technical Operations Center III (Formerly Mid-Continent Mapping Center)

NSDI	National Spatial Data Infrastructure
RA	Reimbursable Agreement
RGIO	Regional Geospatial Information Office
RADAR	Radio Detection and Ranging
SOW	Statement of Work
TO	Task Order
USGS	United States Geological Survey

Attachment B. Points of Contact

Tim Saultz, COR, GPSC POC
USGS NGTOC III
1400 Independence Rd.
MS 600
Rolla, MO 65401
Email: **tsaultz@usgs.gov**
Office: (573) 308-3654
Fax: (573) 308-3810

John Murphey, GPSC POC
USGS NGTOC III
1400 Independence Rd.
MS 602
Rolla, MO 65401
Email: **jmurphey@usgs.gov**
Office: (573) 308-3579
Fax: (573) 308-3810

Debbie Cochran, GPSC POC
USGS NGTOC III
1400 Independence Rd.
MS 602
Rolla, MO 65401
Email: **dcochran@usgs.gov**
Office: (573) 308-3894
Fax: (573) 308-3810

Gail Dunn, GPSC POC
USGS NGTOC III
1400 Independence Rd.
MS 602
Rolla, MO 65401
Email: **gdunn@usgs.gov**
Office: (573) 308-3756
Fax: (573) 308-3810

Eddie Schwertz, Program Analyst, NGTOC Finance POC
USGS NGTOC III
1400 Independence Rd.
MS 230
Rolla, MO 65401
Email: **eschwertz@usgs.gov**
Office: (573) 308-3693
Fax: (573) 308-3652

Eric Constance, NGTOC III Center Chief
USGS NGTOC III
1400 Independence Rd.
MS 300
Rolla, MO 65401
Email: **econstance@usgs.gov**
Office: (573) 308-3685
Fax: (573) 308-3652

Regional Finance Point of Contacts (Regional NSDI Partnership Offices)

Pamela R. Steigerwald, Western Region Finance POC
Cartographer
Regional NSDI Partnership Office, Western Region
650-329-4282

Lindsay Elliott, Eastern Region Finance POC
Administrative Specialist
Regional NSDI Partnership Office, Eastern Region
703-648-4159

Cheryl A.Davis, Central Region Finance POC - Still Waiting for verification that she is this person
Administrative Officer
Regional Geospatial Information Office, Central Region
303-202-4159

USGS Geospatial Liaisons contact information can be accessed from http://nmcatalog.usgs.gov/crreps/faces/crreps.jspx.

Program and Technical Points of Contact

The following people can be used as initial points of contact for background and technical information. For example, it would be appropriate to contact people on these lists to get information about the differences between Lidar and IFSAR, or to learn more about how the NGTOC inspects and validates Lidar data, but these are not the people to discuss (for example) preparation of a Task Order for contracting a specific Lidar collection project.

NGTOC II

Agreements	Laurie Davis
Archive/Scanning/Graphics	Chuck Matthys
Common Systems/development	Paul Wiese
GNIS/Names	Maria McCormick
Imagery/Elevation	Christine Lund

NHD	Ed Kelty (programmatic), Paul Kimsey (technical)

NGTOC III

Agreements	Mike Speak, Alternate: Mark Gewinner
Archive/Scanning/Graphics	Jerry Wagner
GNIS Names	Jane Messenger
Image/Elevation	Bryon Ellingson
NHD	Russ Caton, Carl Nelson
TNM/Catalog	Larry Moore
Transp/Structures/Boundaries	Larry Moore
Standards/FGDC	Bob Rinehart

Attachment C. Steps Required to Process USGS Reimbursable Agreements.

Steps Required to Process USGS Reimbursable Agreements (02/28/2007)				
Steps	**RGIO**	**Cost Center Signing Master Agreement**	**Cost Center Responsible for Actual Work**	**Average Time to Perform Task**
Agreement discussions with reimbursable customer using USGS checklist	X			1 to 3 months per agreement
Decision on Cost Center for work/agreement owner	X	X	X	4 to 5 work days
Cost Center estimate		X	X	2 to 3 work days
Drafting agreement		X	X	4 to 5 work days
Agreement review		X	X	2 to 4 weeks per agreement
Agreement signing by both parties		X	X	4 to 5 work days
Complete NGPO Routing Sheet (attachment B to "Draft Signature Authority for NGPO Agreements dated 8/26/2005)		X	X	2 to 5 work days
Master Agreement entry into BASIS +		X		30 minutes per agreement
Agreement Allocation of Funds into BASIS+— If sub-allocating reimbursable funds to another Cost Center, the "Sub-allocation of Reimbursable Funds" e-mail form must be sent to that cost center		X X		15 minutes per agreement 30 minutes per agreement allocation to another cost center
Funding Detail into BASIS+			X	10 minutes per agreement
Account creation into BASIS+			X	15 minutes per account
Tie account to fund source in BASIS+			X	15 minutes per account
Enter reimbursable agreement into ACIS		X		1 to 2 hours per agreement
Enter labor and other expenses information into BASIS+			X	1 to 2 hours for labor 15 minutes for GPSC contracts
Forward Reimbursable Agreements package to CR-BFS for approval			X	30 minutes per agreement
Monitor progress of work/contractors			X	1 hour monthly per contractor
Review contractor work and approve payments to contractors			X	30 to 60 minutes monthly per contract DI-1
Monitor 289A Billings and Collections Report			X	15 minutes per agreement

Bill customer at least quarterly			X	1 hour per quarter per reimbursable agreement
Delivery of products/services			X	1 to 2 hours per delivery

Attachment D. Reimbursable Agreement Checklist (Sample and Example)

Customer #: _________ Agreement #: ________________ Cost Center: _________

Elements of Agreement: All elements on the checklist must be included in the agreement package when applicable. Indicate by N/A if the element is not applicable. Each section must be verified by initialing on the line provided. The items where a check mark exists in the Page # column are mandatory and the page number must be provided to identify where the element can be found in the agreement package. The agreement package consists of the signed agreement and/or modification; cover/acceptance letter, addendum, or email; completed and signed reimbursable agreement checklist; and any other supporting documentation (e.g., cost share worksheet, special rate approval).

CUSTOMER INFORMATION SECTION:	***Initials:*** ______________________	
	Page #	*Comments*
1) Agreement Number/DCN	√	
2) Name of Organization/Cost Center	√	
3) Legal authority to enter into agreement *(Federal)*	√	**Must be included if agreement based on customer's authority**
4) TIN *(non-Federal, excluding foreign)*	√	
5) DUNS Number *(Federal)*	√	
6) Point of Contact		
7) Address		
8) Office phone, Fax and/or Email		
USGS INFORMATION SECTION:	***Initials:*** ______________________	
	Page #	*Comments*
1) Organization and Cost Center	√	
2) Legal authority to enter into agreement	√	**Must be in the Agreement Package**
3) DUNS Number *(Federal agreements)*	√	
4) Project Chief/Principal Investigator		
5) Address		
6) Office phone, Fax, and/or Email		
7) Signatures		**Is Agreement signed in accordance with Financial Delegations of Authority; for Non-Standard JFAs see SM 205.13.A**
SCOPE OF WORK SECTION :	***Initials:*** ______________________	
	Page #	*Comments*
1) Period of Performance	√	**Start & End Date**
2) Description of Services and Responsibilities		
3) Agreement Deliverables *(If applicable)*		
4) Authority to Publish	√	
5) If in-kind services provided, describe in agreement *(If applicable)*		**Voucher must be sent in with agreement. If not currently available, date you plan to forward to Fiscal Services**.
6) Equipment/Property requirements or restrictions *(If applicable)*		
7) Multiple Tasks *(If applicable)*		
FUNDING INFORMATION SECTION:	***Initials:*** __________________________	
	Page #	*Comments*
1) Total Amount of Agreement	√	
2) Modification Number *(If applicable)*	√	
3) Amount of Modification (*If applicable)*	√	
4) Agreement Type	√	**(Circle All Applicable) Fixed Price, Reimb, JFA, Coop, Other**
BILLING INFORMATION SECTION :	***Initials:*** _______________________	
	Page #	*Comments*
1) Billing Address/Contact /Office Phone	√	**Verify address/contact in VEND table (non-Federal, excluding foreign)**
2) Frequency of Billing	√	**(Circle One) Monthly, Quarterly, Semi-annual, Annual**
3) Federal Customer Agency Location Code	√	
4) Federal Customer Treasury Fund Account Symbol	√	
5) DOD Agreements – Include FSN and MIPR Accounting Classification	√	

-DRAFT-

Code		
6) Mandatory Termination Clause (see attached)	√	
INTERNAL INFORMATION SECTION:		
1) FFS CUSTOMER NUMBER AND FFS AGREEMENT NUMBER (WRITE IN)		
Miscellaneous (If Applicable):		*If Applicable:*
2) Cost Share		**Attach Cost Share Worksheet**
3) Calculations for blended assessment rate *(e.g. interdisciplinary work)*		**Copies must be filed with the agreement**
4) Special Rate Approvals		**Copies must be filed with the agreement**
5) Cover/Acceptance Letter		**Copies of Official letter to accept funds, state authority to publish, reimbursable, etc., must be filed with the agreement**
6) Supports USGS Program		**Write In - Program Element:**
7) Cost Calculations for Direct Costs		**Must be available at Cost Center**
8) Cost Calculations for Indirect Costs		**Must be available at Cost Center**
Project Chief/Principal Investigator *(Name/Phone/Signature)*		**Date**
Cost Center Financial Reviewer *(Name/Phone/Signature)*		**Date**

-DRAFT-

Customer #: _________ Agreement #: _________________ Cost Center: _________

Elements of Agreement: All elements on the checklist must be included in the agreement package when applicable. Indicate by N/A if the element is not applicable. Each section must be verified by initialing on the line provided. The items where a check mark exists in the Page # column are mandatory and the page number must be provided to identify where the element can be found in the agreement package. The agreement package consists of the signed agreement and/or modification; cover/acceptance letter, addendum, or email; completed and signed reimbursable agreement checklist; and any other supporting documentation (e.g., cost share worksheet, special rate approval).

CUSTOMER INFORMATION SECTION:	***Initials:*** ______________________________	
	Page #	*Comments*
1) Agreement Number/DCN	√	
2) Name of Organization/Cost Center	√	
3) Legal authority to enter into agreement *(Federal)*	√	**Must be included if agreement based on customer's authority**
4) TIN *(non-Federal, excluding foreign)*	√	
5) DUNS Number *(Federal)*	√	
6) Point of Contact		
7) Address		
8) Office phone, Fax and/or Email		
USGS INFORMATION SECTION:	***Initials:*** ______________________________	
	Page #	*Comments*
1) Organization and Cost Center	√	
2) Legal authority to enter into agreement	√	**Must be in the Agreement Package**
3) DUNS Number *(Federal agreements)*	√	
4) Project Chief/Principal Investigator		
5) Address		
6) Office phone, Fax, and/or Email		
7) Signatures		**Is Agreement signed in accordance with Financial Delegations of Authority; for Non-Standard JFAs see SM 205.13.A**
SCOPE OF WORK SECTION :	***Initials:*** ______________________________	
	Page #	*Comments*
1) Period of Performance	√	**Start & End Date**
2) Description of Services and Responsibilities		
3) Agreement Deliverables *(If applicable)*		
4) Authority to Publish	√	
5) If in-kind services provided, describe in agreement *(If applicable)*		**Voucher must be sent in with agreement. If not currently available, date you plan to forward to Fiscal Services**.
6) Equipment/Property requirements or restrictions *(If applicable)*		
7) Multiple Tasks *(If applicable)*		
FUNDING INFORMATION SECTION:	***Initials:*** ____________________________________	
	Page #	*Comments*
1) Total Amount of Agreement	√	
2) Modification Number *(If applicable)*	√	
3) Amount of Modification *(If applicable)*	√	
4) Agreement Type	√	**(Circle All Applicable) Fixed Price, Reimb, JFA, Coop, Other**
BILLING INFORMATION SECTION :	***Initials:*** ______________________________	
	Page #	*Comments*
1) Billing Address/Contact /Office Phone	√	**Verify address/contact in VEND table (non-Federal, excluding foreign)**
2) Frequency of Billing	√	**(Circle One) Monthly, Quarterly, Semi-annual, Annual**
3) Federal Customer Agency Location Code	√	
4) Federal Customer Treasury Fund Account Symbol	√	
5) DOD Agreements – Include FSN and MIPR Accounting Classification Code	√	
6) Mandatory Termination Clause (see attached)	√	
INTERNAL INFORMATION SECTION:		
1) FFS CUSTOMER NUMBER AND FFS AGREEMENT NUMBER (WRITE IN)		
Miscellaneous (If Applicable):		*If Applicable:*
2) Cost Share		**Attach Cost Share Worksheet**
3) Calculations for blended assessment rate *(e.g. interdisciplinary work)*		**Copies must be filed with the agreement**
4) Special Rate Approvals		**Copies must be filed with the agreement**

-**DRAFT-**

5) Cover/Acceptance Letter		**Copies of Official letter to accept funds, state authority to publish, reimbursable, etc., must be filed with the agreement**
6) Supports USGS Program		**Write In - Program Element:**
7) Cost Calculations for Direct Costs		**Must be available at Cost Center**
8) Cost Calculations for Indirect Costs		**Must be available at Cost Center**
Project Chief/Principal Investigator (*Name/Phone/Signature)*		**Date**
Cost Center Financial Reviewer *(Name/Phone/Signature)*		**Date**

Attachment E. NGTOC Agreement Routing Sheet

(04/20/2007)

The purpose of this routing sheet is to document the sequence of required processing tasks for all NGTOC III agreements or agreement modifications. This sheet should accompany the agreement and be filed with the agreement upon signature.

	Date:	**Action Completed By:**
1. Agreement Prepared By:	______	________________________
Type of Agreement: ___________________ **Customer's Amount:** ______________		
2. Programmatic/ Technical Review:	**(within NGTOC III)**	
Agreements Liaison Routing	______	________________________
Planning & Analysis Team	______	________________________
GIO/RTA Personnel	______	________________________
Finance POC	______	________________________
Chief, NGTOC III	______	________________________
Agreements Liaison Final review	______	________________________
3. NGTOC Director Review:	_______	________________________
4. Surname Approval : (Chief NGTOC cost center or other USGS cost center chief that will perform the work)	_______	________________________
5. Signed Agreement received from Reimbursable partner:	_______	________________________
6. ACIS No. Assigned: No. ________	_______	________________________
7. USGS Checklist for Reimbursable Agreements completed:	_______	________________________

8. Copies sent to: **Financial POC**_______________ **Agrmt Liaison** ____________

PAT POC _______________ **NSDI Liaison** ____________

9. Copies sent to APS Fiscal Services: (reimbursable agreements only)

___HQ ___ER ___CR ___WR _______ ________________________

10. Copy sent to P&EC for electronic agreement archive: _______ ________________________

(sent to:________________________)

Attachment F. Sub Allocation of Funds Email (Example)

David O Roberts/GIO/USGS/DOI

01/19/2007 07:36 AM

Suballocation of NGA funds to NGTOC III

Eddie,

I have entered FY07 NGA MIPR NPM8G16305GS25 for $4.6 million into BASIS+ and sub-allocated funds in the amount of $238,822.50 to 6103 NGTOC III NPM8G16305GS25N for the urban area orthoimagery projects listed below for the GPSC. An assessment of 5% is included in this total. Attached is the checklist memo. I will FAX you the NGA MIPR and checklist. If you have any question on this MIPR, please contact me. Thank you,

Charleston, SC	$ 99,487.50	USGS will commit $ 99,487.50 from contract funds
Tulsa, OK	$139,335.00	USGS will commit $139,335.00 from contract funds
Total including 5% assessment	$238,822.50	amount of this sub-allocation

NGA FY07 MIPR NG new checklist memo.doc

Dave Roberts, USGS National Orthoimagery Program Coordinator
Geographic Information Integration & Analysis - National Geospatial Programs Office
U. S. Geological Survey - 511 National Center - 12201 Sunrise Valley Drive - Reston, VA 20192
Phone: 703-648-4730 - Fax: 703-648-4722 - Email: drobert1@usgs.gov

Attachment G. NGTOC III Information for Other Agency Purchase Orders

National Geospatial Technical Operations Center III (NGTOC III) Information for Other Agency Purchase Orders (06/06/2007)

Authorized Person to Sign/Accept Purchase Order
Eric Constance, Chief
U. S. Geological Survey
National Geospatial Technical Operations Center III (NGTOC III)
1400 Independence Road, MS 300
Rolla, MO 65401

Phone: (573) 308-3685
Fax: (573) 308-3652

Financial Point of Contact
Eddie Schwertz, Program Analyst
U. S. Geological Survey
National Geospatial Technical Operations Center III (NGTOC III)
1400 Independence Road, MS 230C
Rolla, MO 65401

Phone: (573) 308-3693
Fax: (573) 308-3652

Accounting Information
USGS ALC: 1408-0001

NGTOC DUNS No: 19-596-4445

USGS Employer/Tax ID Number: 53-0196958

USGS Appropriation Code/Symbol (for collection): 14y0804 (where y = the current BFY)

Should you have additional questions, please call Eddie Schwertz at (573) 308-3693.

NGTOC III will need the ALC and Fiscal Station Number (FSN) from military organizations. We also need the DUNS number for other Federal agencies.

Attachment H Milestones and checklists

State Liaison checklist (pre-award)

______ Define project parameters and expectations with client (use Project Planning document, Attachment I, if appropriate).

______ Initiate Contact with the GPSC COR and CTP.

______ Initiate Contact with Regional Finance POC (Regional NSDI Partnership Cost Center).

______ Determine product specifications (product type, ground resolution, processing level, accuracy levels, sun angle, leaf-off, CIR, natural color, features, stereo models, format, etc.).

______Clearly define area of interest (AOI) using a shapefile or geographic boundary.

______Explore and discuss QA/QC options with client:

1. Client QA/QC
2. Contractor QA/QC (can be included in task)
3. USGS QA/QC (separate agreement must be reached with NGTOC II or III.)

______ Explore funding considerations with client including funding source, assessments, and partnerships.

______ Prepare financial documentation working with the Regional Finance POC.

______ Prepare and submit SOW to GPSC COR, include AOI shapefile, bounding coordinates, list of counties, or similar description of study area, and Project Planning forms (attachment I) where appropriate.

______Once the Independent Government Cost Estimate (IGCE) and draft Task Order are received from GPSC COR and CPTPOC, discuss and finalize documents with client.

______Upon client approval of IGCE and SOW, finalize and submit Reimbursable Agreements to the NGTOC Finance POC. The Regional Finance POC from the cost center that owns the Master Agreement must work with the NGTOC III Finance POC to complete the sub-allocation of funds to NGTOC III (cost center 6103).

GPSC COR and CPTPOC checklist (pre-award)

______After initial contact from State Liaison, contact CO and NGTOC Finance POC and advise them of possible new tasking.

______Assist State Liaison with questions regarding SOW.

______Once SOW is received from the Liaison the GPSC COR will determine the appropriate contract vehicle (A&E, Best Value, CAP-C).

______The CPTPOC will prepare the Independent Government Cost Estimate (IGCE) using the SOW.

______The IGCE and draft SOW are submitted to the client via the Liaison for review and approval.

______Once the Reimbursable Agreements are in place and confirmed by the NGTOC III Finance POC, the DI-1 is prepared and signed by NGTOC officials.

_______ Submit Task Order, DI-1, and supporting financial documentation to the CO at Central Regional Services, Acquisitions and Grants Branch.

TASK ORDER MILESTONES

Request for Proposal (RFP) prepared by the CO and sent to Contractor.

Contractor submits Technical & Cost Proposal.

GPSC COR, CPTPOC, and CO review Technical & Cost proposal. (Technical Proposal and overall cost is shared with client and Liaison).

Negotiations are held between contractor and the government represented by the CO, GPSC COR, and CPT POC.

After successful negotiations, the Task Order is awarded to the contractor.

Contractor begins works and submits monthly progress reports.

CPTPOC monitors deliverables and monthly report schedules.

CPTPOC keeps GPSC COR, NGTOC Finance POC, Liaison, and client apprised of progress, developments, delays, or work quality.

GPSC COR keeps CO informed. Contract modifications, if needed are recommended by GPSC COR and completed by CO.

Deliverables are reviewed according to terms agreed to in the Task Order.

CPTPOC advises GPSC COR of deliverable review and recommends acceptance or rework of deliverable.

POST AWARD MILESTONES

GPSC COR prepares follow-up documentation

Once all deliverables have been delivered and accepted, GPSC COR notifies CO, Liaison, Client, NGTOC Finance POC, and contractor.

Once the contractor's invoice is received, it is reviewed for accuracy, approved by the CO and then submitted to the NGTOC accounting tech, Christina Ragan for payment.

Approximately 60 to 90 days after the conclusion of the mission, the client is billed via IPAC by NGTOC Finance POC.

Attachment I Project Planning Forms

LIDAR PROJECT PLANNING REQUIREMENTS

Submit only ONE COMPLETE REQUIREMENT per Form

Project Title:	**Primary Contact** (Liaison)**:**
Funding Sources: (Check all that apply)	USGS - ☐ : Other Federal - ☐ : State Government - ☐ : Local Government - ☐ : Other (explain) - ☐
Partner Agency Financial Point of Contact (Name, address, phone, and e-mail -Include all if more than one agency is involved)	
Project Foot Print (shapefile) Included : ☐ If Not – Why Not and when will it be provided : Shape file parameters: Datum - : Projection - Shape files must be provided by partner before an estimate of project will be provided.	
Date Estimate is required: **(Allow a minimum of 1 week for estimate from time of supplying all information. Allow more time for more complex tasks.)**	
Date Project is expected to start: (**Allow a minimum of 3 weeks from funding becoming available to NGTOC.)** Date FUNDING is expected to be available and all documents signed :	

VARIABLY SPACED LIDAR PRODUCTS

Ground Sample Distance	0.7-meter - ☐ : 1.0-meter - ☐ : 1.4-meter - ☐ : Other:
Collection Conditions	Leaf Off - ☐ : Snow Free - ☐ : Normal Water - ☐ : Other Conditions -
Accuracy Required (Bare Earth)	Vertical : 15cm VRMSE - ☐ : 18cm VRMSE - ☐ : Other - Horizontal : 1 meter RMS @ 95% confidence level - ☐ : Other -
Products (Mass Points)	First Return - ☐ : Last Return - ☐ : Bare Earth - ☐ : No. Returns Required -
Datum (select one each)	Vertical : NGVD 29 - ☐ : NAVD 88 (default) - ☐ : Other - Horizontal : NAD 27 - ☐ : NAD 83 (default) - ☐
Coordinate System (select one)	Geographic: ☐ : UTM: ☐ - (Zone) State Plane: ☐ - (Zone)
Units	Meters - ☐ to decimal places (meters is default for UTM) Feet - ☐ to decimal places (feet is default for State Plane)
Tile Size	1500m x 1500m - ☐ : 2000m x 2000m - ☐ (default meters) : Other - 1mile x 1mile - ☐ : 2mile x 2mile - ☐ (default feet) : Other - Should tiles be filled to tile edge? ☐ Or to project shape file? ☐
Metadata Required	Project Level - ☐ and/or File (tile) Level - ☐

SECONDARY PRODUCTS

(extra cost for each)

Break Lines	No - ☐ : Yes - ☐ (normally compiled from Intensity images)

DEM	1.0m - ☐ : 5.0m - ☐ : 10.0m - ☐ : Other : Hydro Enforced? ☐
Contours	0.5’ - ☐ : 1.0’ - ☐ : 2.0’ - ☐ : 4.0’ - ☐ : 1m - ☐ : Other -
Intensity Image	No - ☐ : Yes - ☐ (will match Bare Earth tile size – Required for Break Lines)
Other	State other requirement(s) not listed above:
FORMAT AND DELIVERABLES	
Tile Sizes	Mass Points : (See above) DEM : Match VS data - ☐ : USGS QQ - ☐ : USGS Quad - ☐ : Other - Break Lines : Match VS data - ☐ : USGS QQ - ☐ : USGS Quad - ☐ : Other - Contours : Match VS data - ☐ : USGS QQ - ☐ : USGS Quad - ☐ : Other -
Formats	Mass Points : ASCII x,y,x,i format - ☐ : LAS format - ☐ : TIN - ☐ : ArcShape - ☐ DEM : USGS DEM - ☐ : ESRI Float Grid - ☐ : ESRI Integer Grid - ☐ - Other - Break Lines : Arc Shape - ☐ : Other - Contours : Arc Shape - ☐ : USGS DLG-O - ☐ : Other -
Delivery Media	CD-ROM - ☐ : DVD - ☐ : Firewire (external hard drive) - ☐ : Other -
Who Deliver To	(Include Name, Address, Phone #, and e-mail):
QA/QC	
Who will do QA/QC	**Note:** It is the responsibility of the liaisons to arrange or secure Quality Assessment. In cases where QA will be done via contract the Commercial Partnership Team will supply a cost estimate.
Partner	☐ - Partner agrees to 100% responsibility for QA to contract specifications within contractual time frame
NGTOC	☐ - Liaison will contact NGTOC Chief for separate QA agreement
Via Contract	☐ - Available for additional cost if NGTOC capacity is not available
Other Requirements not list above: ☐ : EXPLAIN -	
NOTICE This document is meant to be a “living” document. Additional requirements of modifications to this document may be requested via the Commercial Partnership Team	

http://thor-f5.er.usgs.gov/GPSC/LiDAR_Project_Planning_Requirements_4_11_2007.doc

ORTHO IMAGERY PROJECT PLANNING REQUIREMENTS

Submit only <u>ONE COMPLETE REQUIREMENT</u> per Form

Project Title:	**Primary Contact** (Liaison)**:**
Funding Sources: (Check all that apply)	USGS - ☐ : Other Federal - ☐ : State Government - ☐ : Local Government - ☐ : Other (explain) - ☐

Partner Agency Financial Point of Contact (Name, address, phone, and e-mail -Include all if more than one agency is involved)

Project Foot Print (shapefile) Included : ☐ If Not – Why Not and when will it be provided :
Shape file parameters: Datum - : Projection -
Shape files must be provided by partner before an estimate of project will be provided.

Date Estimate is required:
(Allow a minimum of 1 week for estimate from time of supplying all information. Allow more time for more complex tasks.)

Date Project is expected to start: (**Allow a minimum of 3 weeks from funding becoming available to NGTOC.)**
Date FUNDING is expected to be available and all documents signed :

ACQUISITION REQUIREMENTS

Imagery Source: (Check all that apply)	FILM - ☐ : DMC - ☐ : ADS40 - ☐ : Other (explain) - Color - ☐ : B&W (Panchromatic) - ☐ : CIR - ☐ Is a specific Flight Height Required - ☐ : What Flight Height? -
Acquisition Conditions:	Leaf Off - ☐ : Snow Free - ☐ : Normal Water - ☐ : Sun Angle - : Other Conditions -

ORTHO PRODUCTION

Ortho Requirements: (Check all that apply)	GSD (resolution): **6in** - ☐ : **1ft** - ☐ : **½ m** - ☐ : **1m** - ☐ : Other - Georectified - ☐ : Orthorectified - ☐ : - Unrectified - ☐ 8 bit ☐ : 12 bit ☐ : other ☐ explain
Datum:	UTM - ☐ (zone) : State Plane : ☐ (zone) ; Other: NOTE: UTM coordinates will be meters – State Plane coordinates will be Feet
Tiling Scheme:	133UA (1500x1500m) - ☐ : Quarter-Quad ☐ - : Quarter- Quarter- Quad - ☐ : Other Grid size x in feet ☐ ; or meters ☐ ; Over-edge Required - ☐ : How much? Should tiles be filled to tile edge? ☐ Or to project shape file? ☐
Metadata Required:	Project Level - ☐ and/or File (tile) Level - ☐
Delivery Media:	CD-ROM - ☐ : DVD - ☐ : Firewire (external hard drive) - ☐
Who Deliver To:	(Include Name, Address, Phone #, and e-mail):

QA/QC

Who will do QA/QC	**Note:** It is the responsibility of the liaisons to arrange or secure Quality Assessment. In cases where QA will be done via contract the Commercial Partnership Team will supply a cost estimate.

Partner	☐ - Partner agrees to 100% responsibility for QA to contract specifications within contractual time frame
NGTOC	☐ - Liaison will contact NGTOC Chief for separate QA agreement
Via Contract	☐ - Available for additional cost if NGTOC capacity is not available
Other Requirements not list above: ☐ : EXPLAIN -	
NOTICE This document is meant to be a "living" document. Additional requirements of modifications to this document may be requested via the Commercial Partnership Team	

http://thor-f5.er.usgs.gov/GPSC/Ortho_Imagery_Project_Planning_Requirements_4_11_2007.doc